RISK INSIGHTS

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INSURANCE GROUP

Mold and Bacteria Concerns Due to Extended Building Shutdowns or Reduced Operations

If an office or facility experiences reduced operations or is shut down for an extended period of time, it's important to address any potential risks that may have developed. Two such hazards that can impact the health of building occupants include the growth of Legionella bacteria and mold—which can flourish in plumbing and heating, ventilating and air conditioning (HVAC) systems that aren't properly maintained.

This article explains what Legionella and mold are, discusses the risk factors that allow them to grow during extended building shutdowns or reduced operations and outlines measures organizations can take to minimize these microbial hazards before reopening.

Legionella and Mold

Legionella bacteria is a waterborne bacterium found in rivers, lakes, reservoirs and man-made water sources that are not properly maintained, including HVAC and plumbing systems in large buildings. If Legionella is left untreated, it can contaminate water; people can become ill when they breathe in small, bacteria-filled water droplets. One serious health issue that may arise for people exposed to Legionella is Legionnaires' disease, a severe form of pneumonia, with symptoms such as cough, shortness of breath, fever, muscle aches and headache. Legionnaires' disease has a case-fatality rate of about 10%, according to the Centers for Disease Control and Prevention.

On the other hand, mold is a fungus found both indoors and outdoors that requires moisture to grow. There are thousands of different species of mold, and many can cause property damage and health issues if left unattended. Exposure to mold can cause various health effects, including headaches, rashes, and respiratory tract and eye irritation. More severe symptoms may include complete immune system failure, cognitive memory loss, brain damage and even death.

Risk Factors

Extended building shutdowns and reduced operations can create optimum conditions for Legionella and mold to thrive. Stagnant water in dormant water systems, water-using devices and cooling towers can breed Legionella. When water is stagnant, temperatures can decrease to a range ideal for Legionella bacteria to grow. Stagnant water can also lead to low or undetectable levels of disinfectant, like chlorine.

Mold is often the result of excess moisture from roofs, windows, pipes or flooding. Increased humidity from inactive HVAC systems can also result in mold, which can grow on paper products, cardboard, ceiling tiles, wood products, insulation, drywall, carpet, fabric and upholstery.

Minimizing Risk Before Reopening

Before occupants return to offices and facilities, organizations should ensure the building is free of

Legionella and mold. To minimize the risk of Legionella, organizations should:

- **Flush water systems.** Flush hot- and cold-water systems through all points of use, including sinks, showers and toilets. Systems that have been stagnant for long periods of time may require advanced disinfection measures.
- **Clean cooling towers.** Follow the manufacturers' guidelines when cleaning cooling towers and remove visible slime, debris and biofilm.
- **Treat water-using equipment.** Drain, clean and flush water fountains, icemakers, pools, spas and other water-using equipment. Fire sprinkler systems and eyewash stations should also be flushed and treated before reopening.

To minimize mold growth:

- **Maintain indoor humidity.** Maintain low indoor humidity, ideally 30% to 50% relative humidity but always lower than 60%.
- **Assess the building before occupants return.** Inspect equipment and surfaces for signs of mold. A building and environmental health professional can also assist in determining what steps can be taken to limit moisture.
- **Clean, repair and replace as necessary.** Clean and repair any surfaces with mold, and replace any materials that cannot be sufficiently cleaned.
- **Operate the HVAC system before occupants return.** Run inactive HVAC systems for at least 48 to 72 hours prior to reopening.
- **Perform routine HVAC checks and necessary maintenance.** Schedule regular inspections, cleanings and filter replacements during the early stages of the building's reoccupation.

Organizations should also look into maintaining appropriate insurance coverage to limit their liability against Legionella and mold. Coverage is often provided under an environmental liability policy.

Conclusion

Keeping building occupants safe when they return to an office or facility that has been shut down or had reduced operations should be a priority for all organizations. For more risk management guidance, contact us today.